AMENDMENTS TO THE CLAIMS

Claim 1 (Currently amended) A substrate processing apparatus, comprising:

a substrate holder for holding a substrate;

~~a plurality of~~ anodes and cathodes disposed ~~opposite~~ so as to face a surface of the substrate when held by ~~the~~ said substrate holder and arranged alternately along at least one direction;

a processing liquid supply section for supplying a processing liquid between the substrate, when held by ~~the~~ said substrate holder, and ~~the~~ said ~~plurality of~~ anodes and cathodes; and

a power source for applying a voltage between ~~the~~ said anodes and ~~the~~ said cathodes.

Claim 2 (Currently amended) The substrate processing apparatus according to claim 1, further comprising:

a drive mechanism for bringing ~~the~~ said anodes and ~~the~~ said cathodes close to the substrate when held by ~~the~~ said substrate holder, and

a rotational drive mechanism for rotating the substrate when held by ~~the~~ said substrate holder.

Claim 3 (Original) The substrate processing apparatus according to claim 1, wherein the processing liquid contains an electrolyte.

Claim 4 (Currently amended) The substrate processing apparatus according to claim 1, further comprising:

a rectifier for rectifying ~~the~~ a waveform, of an electric current to be applied between ~~the~~ said anodes and ~~the~~ said cathodes, to at least one of an alternating current waveform, a direct current waveform, a direct current reverse voltage waveform, a pulse waveform, a PR pulse waveform, and a double pulse waveform.

Claim 5 (Currently amended) The substrate processing apparatus according to claim 1, wherein ~~the~~ said anodes are arranged over a plane at regular intervals along orthogonal directions, and each of said cathodes is disposed approximately ~~in the center~~ centrally between two of said anodes adjacent ~~to~~ each other in an oblique direction.

Claim 6 (Currently amended) The substrate processing apparatus according to claim 1, wherein ~~the~~ said cathodes are arranged over a plane at regular intervals along orthogonal directions, and each of said anodes is disposed approximately ~~in the center~~ centrally between two of said cathodes adjacent ~~to~~ each other in an oblique direction.

Claim 7(Currently amended) The substrate processing apparatus according to claim 1, wherein ~~at least one of~~ said ~~the~~ anodes ~~and the~~ or said cathodes are made of a conductive diamond or lead dioxide.

Claim 8 (Currently amended) The substrate processing apparatus according to claim 1, wherein ~~the~~ a distance between the substrate, when held by ~~the~~ said substrate holder, and ~~the~~ said anodes differs from ~~the~~ a distance between the substrate, when held by ~~the~~ said substrate holder, and ~~the~~ said cathodes.

Claim 9 (Currently amended) The substrate processing apparatus according to claim 1, wherein

a supply port of ~~the~~ said processing liquid supply section is provided in one of

(i) each of said anodes, and

(ii) each of said cathodes, and

a suction port for sucking in the processing liquid supplied from ~~the~~ said supply port is provided in the other one of

(i) each of said anodes, and,

(ii) each of said cathodes.

Claims 10 (Currently amended) A substrate processing method, comprising:

~~bringing a plurality of~~ disposing anodes and cathodes, arranged alternately along at least one direction, ~~close to~~ so as to face a substrate held by a substrate holder;

supplying a processing liquid between ~~the~~ said substrate, held by said substrate holder, and ~~the plurality of~~ said anodes and cathodes; and

applying a voltage between ~~the~~ said anodes and ~~the~~ said cathodes.

Claim 11 (Currently amended) The substrate processing method according to claim 10, further comprising: ~~wherein the~~

rotating said substrate ~~is rotated~~ while applying said ~~the~~ voltage ~~is applied~~ between ~~the~~ said anodes and ~~the~~ cathodes.

Claim 12 (Currently amended) The substrate processing method according to claim 10, wherein supplying a processing liquid comprises supplying a ~~the~~ processing liquid ~~contains~~ containing an electrolyte.

Claim 13 (Currently amended) The substrate processing method according to claim 10, further comprising:

between said anodes and cathodes applying ~~wherein~~ an electric current having at least one of an alternating current waveform, a direct current waveform, a direct current reverse voltage waveform, a pulse waveform, a PR pulse waveform, and a double pulse waveform~~, is applied between the anodes and the cathodes~~.

Claim 14 (Currently amended) The substrate processing method according to claim 10, wherein ~~the~~ a distance between ~~the~~ said substrate held by ~~a~~ said substrate holder and ~~the~~ said anodes differs from ~~the~~ a distance between ~~the~~ said substrate held by the substrate holder and ~~the~~ said cathodes.

Claim 15 (Currently) The substrate processing method according to claim 10, wherein ~~the~~ supplying a processing liquid comprises supplying said processing liquid ~~is supplied~~ to ~~the~~ said substrate from a supply port provided in one of

(i) each of said anodes, and

(ii) each of said cathodes,

while ~~the~~ processing liquid supplied to ~~the~~ said substrate is sucked ~~from~~ via a suction port provided in the other one of

(i) each of said anodes, and

(ii) each of said cathodes.

Claim 16 (Currently amended) ~~A~~ ~~The~~ substrate processing apparatus, according to claim 1 further comprising:

~~a substrate holder for holding a substrate;~~

a processing head having ~~the~~ said ~~plurality of~~ anodes and said cathodes and disposed such that ~~it~~ said processing head faces the substrate when held by ~~the~~ said substrate holder; and

~~a processing liquid supply section for supplying a processing liquid between the substrate held by the substrate holder and the processing head;~~

~~wherein a plurality of anodes and cathodes, and~~ an ultrasonic transducer for emitting ultrasonic waves toward the processing liquid ~~are disposed in the substrate-facing surface of the processing head.~~

Claim 17 (Currently amended) The substrate processing apparatus according to claim 16, further comprising:

a relative movement mechanism for moving ~~the~~ said processing head relative to the substrate when held by said substrate holder.

Claim 18 (Currently amended) The substrate processing apparatus according to claim 17, wherein ~~the~~ said relative movement mechanism is for rotating said ~~rotates the~~ processing head.

Claim 19 (Currently amended l) The substrate processing apparatus according to claim 16, further comprising:

a pulse power source for applying a pulse voltage between ~~the~~ said anodes and ~~the~~ said cathodes.

Claim 20 (Currently amended) A substrate processing apparatus, comprising:

a processing liquid supply section for supplying a processing liquid onto a substrate;

a ~~microbubble~~ micro-bubble generator for generating ~~microbubbles~~ micro-bubbles in the processing liquid; and

an ultrasonic transducer for emitting ultrasonic waves to the processing liquid containing the ~~microbubbles~~ micro-bubbles.

Claim 21 (Currently amended) The substrate processing apparatus according to claim 20, wherein ~~the~~ said micro-bubbles generator is for generating ~~microbubbles~~ micro-bubbles ~~have~~ having a diameter of not more than 20 μm~~;~~ and ~~have~~ an internal pressure of not lower than atmospheric pressure.

Claim 22 (Currently amended) The substrate processing apparatus according to claim 20, wherein ~~the~~ said ~~microbubble~~ micro-bubble generator comprises one of a two-fluid nozzle, a gas diffuser, a gas/liquid stirrer,~~or~~ and an electrolytic gas generator.

Claim 23 (Currently amended) The substrate processing apparatus according to claim 20, further comprising:

a substrate holder for holding a substrate; and

a rotating mechanism for rotating the substrate when held by said substrate holder;

wherein ~~the~~ said ultrasonic transducer is disposed such that it faces the substrate when held by ~~the~~ said substrate holder.

Claim 24 (Currently amended) The substrate processing apparatus according to claim 23, wherein ~~the~~ said ultrasonic transducer has a processing liquid introduction port, and the processing liquid is to be supplied through ~~the~~ said processing liquid introduction port to between the substrate, when held by the substrate holder, and ~~the~~ said ultrasonic transducer.

Claim 25 (Currently amended) The substrate processing apparatus according to claim 20, wherein ~~the frequency of the~~ said ultrasonic transducer is for emitting ultrasonic waves having a frequency of from ~~emitted from the ultrasonic transducer is~~ 5 to 100 MHz.

Claim 26 (Currently amended) A substrate processing apparatus, comprising:

a substrate holder for holding and rotating a substrate;

a ~~rotatable~~ rotary plate disposed opposite to one of ~~the~~ front and back surfaces of the substrate when held by ~~the~~ said substrate holder, said rotary plate being arranged at a predetermined distance ~~therefrom~~ from the substrate, when held by said substrate holder, so as to form a circular processing space therebetween; and

a first fluid supply section for supplying a first processing fluid ~~between the substrate held by the substrate holder and the rotary plate~~ to fill the circular processing space with the first processing fluid.

Claim 27 (Currently amended) The substrate processing apparatus according to claim 26, wherein ~~the~~ said substrate holder and ~~the~~ said rotary plate are to rotate in opposite directions.

Claim 28 (Currently amended) The substrate processing apparatus according to claim 26, wherein the first processing fluid is an etching liquid.

Claim 29 (Currently amended) The substrate processing apparatus according to claim 26, further comprising:

a counter plate disposed opposite to the other one of the front and back surfaces of the substrate, when held by ~~the~~ said substrate holder, at a predetermined distance therefrom, and

a second fluid supply section for supplying a second processing fluid between the substrate, when held by ~~the~~ said substrate holder, and ~~the~~ said counter plate.

Claim 30 (Currently amended) The substrate processing apparatus according to claim 29, wherein ~~the~~ said counter plate is rotatable.

Claim 31 (Currently amended) The substrate processing apparatus according to claim 30, wherein ~~the~~ said counter plate is to rotate ~~rotates~~ in a direction opposite to ~~the rotating~~ a rotational direction of ~~the~~ said substrate holder.

Claim 32 (Currently amended) The substrate processing apparatus according to claim 29, wherein the second processing fluid is an etching liquid.

Claim 33 (Currently amended) The substrate processing apparatus according to claim 29, wherein ~~the~~ said counter plate is rotatable.